

MISSISSIPPI STATE UNIVERSITY

INSTITUTE FOR ENVIRONMENTAL STUDIES

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E7.3 100.75.
CR-130016

ERTS Project Scientist
Goddard Space Flight Center
Code 650
Greenbelt, Maryland 20771

Gentlemen:

This letter constitutes the second Type I progress report as called for
in Article II of the NASA contract document NAS5-21881.

- (a) This report concerns ERTS-A proposal NASA control no. SR-097
having the title: Application of ERTS-A Data to Agricultural
Practices in the Mississippi Delta Region
- (b) The principal investigator is C. W. Bouchillon, Ph.D.
Principal Investigator - UN023
Mississippi State University
Drawer GH
Mississippi State, Mississippi 39762
- (c) At this time there are no problems impeding the progress of the
investigation.
- (d) This section of the report, covering the period ending January 31,
1973, will be covered in three sections: I. Data Management;
II. Ground Truth; III. Application of ERTS DATA to Potential Users.

I. DATA MANAGEMENT

This phase of the contract includes scheduling of personnel efforts
for ground truth collection and coordination of the use of the computer
maps to be produced by NASA-MTF-ERL by the Cooperative Extension Service
personnel. Preliminary plans for data acquisition have been made.
Instrumentation for ground truth has been ordered.

The photographic data received to date is undergoing some basic
analysis to determine the possibility of its use in digital form by
NASA-MTF-ERL facility. A rough analysis of the data is compiled
bi-weekly to provide this assessment and to give NASA an idea of when
the data is received by Mississippi State personnel and how we view the
data's usefulness based upon the synoptic analysis of the MSS photography.

N73-16337

Unclas
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CSCL 02C G3/13

(E73-10075) APPLICATION OF ERTS-A DATA
TO AGRICULTURAL PRACTICES IN THE
MISSISSIPPI DELTA REGION Progress Report
(Mississippi State Univ.) 5 p HC \$3.00

According to the orbits of ERTS-1 (shown in the Data Users Handbook), data from the Mississippi Delta study site should be obtained twice every 18 day cycle (once each on two adjacent orbits). Table 1 lists the pass dates and times, orbit numbers, co-ordinates, and cloud covers for the data which was taken in 1972 (information taken from U.S. Standard Catalogs). The MSU researchers should receive all data taken over the Delta site which has a cloud cover of 30% or less. That which has been received is noted on Table 1.

The data which has been received has been visually analyzed to determine total area covered, percent of Delta site covered, cloud cover, system abnormalities, and apparent quality. The result of this analysis is recorded on a data analysis sheet (a copy of this sheet is included with this report). These results will be used to make statistical statements about the availability of ERTS-1 data, how often it is made useless by clouds of system failures, and other related ideas which will be contained in the project final report.

At this time little data has been received, however the October 1 & 2 passes resulted in excellent data over the test site. No computer generated data has been received from NASA-MTF as of yet and it is not expected until planting season begins around mid March. Therefore, it is impossible to make any meaningful statements about the data and its quality at this time.

A visit to the NASA-MTF-ERL facility was made to familiarize the project personnel with the data analysis procedures and to see typical computer products. This visit was fruitful in that the project personnel seem to have a much better understanding of the type of data they will receive.

A project review meeting was held at Mississippi State University in January for Mr. R. Pyland of the NASA-MTF-ERL facility. A complete presentation of the status of the project financially and technically was given.

II. GROUND TRUTH

This phase is still in the embryonic stage and the preliminary work accomplished has been covered in Section I.

III. APPLICATION OF ERTS DATA TO POTENTIAL USERS

This section will not be activated until data in the project preliminary planning is underway.

- (e) No significant results have been obtained during this period.
- (f) No papers or publications have been released during this period.
- (g) No recommendations are offered at this time.

- (h) There are no changes in standing order forms.
- (i) There are no description forms for this period.
- (j) All digital data for this project is obtained through NASA-MTF-ERL.
There are no request forms filed specifically for this project.
- (k) There is no other information to report at this time.

Sincerely,



C. W. Bouchillon
Director

CWB/mjr

Enclosures (2)

TABLE 1 - DATA TAKEN OVER THE MISSISSIPPI DELTA TEST SITE DURING 1972

| CYCLE | DATE | | ORBIT | DATE | TIME | CENTER POINT | | CLOUD COVER | DATA RCV'D. |
|------------|------|----|-------|----------------------|-------|--------------|---------|-------------|-------------|
| | | | | | | N. LAT | W. LONG | | |
| Cycle I | Aug | 8 | 222 | 1016 - | 16064 | 32.792 | 90.217 | 20 % | |
| | Aug | 9 | 236 | 1017 - | 16120 | 33.917 | 91.309 | 40 % | |
| Cycle II | Aug | 26 | 473 | 1034 - | 16064 | 33.073 | 90.149 | 50 % | |
| | Aug | 27 | 487 | 1035 - | 16121 | 33.715 | 91.392 | 0 % | Yes |
| Cycle III | Sept | 13 | 724 | 1052 - | 16064 | 33.097 | 90.136 | 0 % | Yes |
| | Sept | 14 | 738 | Not Listed | | | | | |
| Cycle IV | Oct | 1 | 975 | 1070 - | 16064 | 33.231 | 90.036 | 0 % | YES |
| | Oct | 2 | 989 | 1071 - | 16122 | 33.284 | 91.443 | 0 % | YES |
| Cycle V | Oct | 19 | 1226 | 1088 - | 16070 | 33.110 | 90.165 | 100 % | |
| | Oct | 20 | 1240 | 1089 - | 16125 | 33.174 | 91.611 | 50 % | |
| Cycle VI | Nov | 6 | 1477 | 1106 - | 16072 | 33.017 | 90.233 | 60 % | |
| | Nov | 7 | 1491 | 1107 - | 16130 | 33.064 | 91.635 | 60 % | |
| Cycle VII | Nov | 24 | 1728 | 1124 - | 16073 | 23.116 | 90.171 | 80 % | |
| | Nov | 25 | 1742 | Not Listed | | | | | |
| Cycle VIII | Dec | 12 | 1979 | Not Listed | | | | | |
| | Dec | 13 | 1993 | 1143 - | 16131 | 33.032 | 91.647 | 100 % | |
| Cycle IX | Dec | 30 | 2230 | Catalog not received | | | | | |
| | Dec | 31 | 2244 | Catalog not received | | | | | |

DELTA DATA ANALYSIS SHEET

[illegible]